

REMARKS/ARGUMENTS

Claims 1 and 4 were rejected under 35 U.S.C. § 102 (e) as being unpatentable over Wilbur (US 2004/0189769) in view of Jung (US 2003/0066452). Claims 9 and 10 were rejected under 35 U.S.C. § 102 (e) as being unpatentable over Jung in view of Wilbur. Claims 1 and 5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Doberenz (US 2003/0071863) in view of Jung. Claims 12 to 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Jung in view of Wilbur as applied to claims 9 and 10 and further in view of Rodi (US 5,115,741). Claims 2, 3, 6, 7, and 8 have been allowed.

Reconsideration of the application is respectfully requested.

35 U.S.C. 102 Rejections

Claims 1 and 4 were rejected under 35 U.S.C. § 102 (e) as being unpatentable over Wilbur (US 2004/0189769) in view of Jung (US 2003/0066452).

It is assumed that a 35 U.S.C. 103 rejection is meant, as a 102(e) rejection must be based on a single reference.

Wilbur discloses curing of sprayed or jetted ink by heat (see [0029] et seq.)

Jung discloses a method and apparatus for processing a printing ink in a rotary printing machine. Applicator 7 is after the printing position.

Claim 1 recites a method for drying a printing ink on a printing substrate in a printing press comprising the steps of :

using at least one printing ink to print on the printing substrate at a first position of a path, the printing substrate being moved along the path through the printing press; and

applying a treatment agent at a second position of the path on the printing substrate to accelerate drying of the printing ink on the printing substrate;

the applying of the treatment agent at the second position occurring before the printing at the first position.

As per the present specification, "application of a treatment agent... on the printing substrate" means that a physical substance is deposited on the printing substrate. Heat or radiation are not agents applied on a substrate, as clear from the specification at for example [0003],[0004], [0015] and [0016].

Wilbur does not disclose a treatment agent applied on a substrate. Any treatment application in Jung occurs after printing.

Withdrawal of the rejection is respectfully requested.

In addition with respect to claim 4, claim 4 further recites the “drying method as recited in claim 1 wherein the printing substrate is dried by the action of radiant energy at a chronologically later point in time from the using and applying steps at at least one third position of the path.”

If somehow the asserted applying step includes heating (which it does not), then there is no reason or teaching to then again dry at a “chronologically later point in time” since the ink would already be dry. Withdrawal of the rejection to claim 4 in any event is respectfully requested.

Claims 9 and 10 were rejected under 35 U.S.C. § 102 (e) as being unpatentable over Jung in view of Wilbur.

Claim 9 recites printing press comprising:

at least one print unit at a first position along a path of a printing substrate through the printing press, and

at least one drying device at a third position along the path downstream from the print unit for supplying energy to the printing substrate;

wherein at one further second position upstream from the drying device, the printing press includes a conditioning apparatus applying a treatment agent accelerating drying of the printing ink on the printing substrate at the third position; and

wherein the drying device includes at least one narrow-band radiant energy source emitting light of one wavelength in the near infrared region.

Jung does not disclose a conditioning apparatus a narrow-band radiant energy source emitting light of one wavelength.

Wilbur discloses “*a wide wavelength spectrum of visible light, with the wavelength spectrum having a high peak at or near shorter wavelengths of the IR spectrum*”

“A narrow-band radiant energy source emitting *one* wavelength of light” as claimed is for example lasers described in [0036]. It is not a wide wavelength *spectrum* generating device as described in Wilbur.

Withdrawal of the rejection to claims 9 and 10 is respectfully requested.

In view of the above withdrawal of the rejection to claims 1, 4, 9, and 10 is respectfully requested.

35 U.S.C. 103 Rejections

Claims 1 and 5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Doberenz (US 2003/0071863) in view of Jung. Claims 12 to 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Jung in view of Wilbur as applied to claims 9 and 10 and further in view of Rodi (US 5,115,741).

Doberenz is directed to an ink jet printing pen in which a chemical dispenser 36 such that the chemical is dispensed just before the ink, causing the ink to dry on contact. [0028].

Claim 1 recites a method for drying a printing ink on a printing substrate in a printing press comprising the steps of :

using at least one printing ink to print on the printing substrate at a first position of a path, the printing substrate being moved along the path through the printing press; and

applying a treatment agent at a second position of the path on the printing substrate to accelerate drying of the printing ink on the printing substrate ;

the applying of the treatment agent at the second position occurring before the printing at the first position.

It is not clear from Doberenz that the chemical does not contact the ink in the air or before printing, and thus there is not clear disclosure of “applying a treatment agent ... before the printing” as claimed.

In addition, the printing substrate is not moved in Doberenz during this process, *but rather the pen is moved*. See [0018] and [0019]. Doberenz thus does not teach or disclose “the printing substrate being moved along the path through the printing press”, or applying a treatment agent at a “second position of the path”.

There also would have been no motivation or desire to combine a pen-based printing system where the pen must be moved over a 2-D stationary image with the printing device of Jung. These are completely different types of printing devices and it is respectfully submitted that using a hand-held pen with the printing press of Jung would be dangerous and not obvious to one of skill in the art. Moreover, the movement of a sheet would make the pen of Doberenz

difficult to use in any printing press, as many sweeps are needed. See[0027]: “This may include many subsequent passes over the previously printed pixels, as missed pixels are printed.”

With respect to claim 12, claim 12 recites “the printing press as recited in claim 9 wherein the narrow-band radiant energy source is a laser light source.” However, the curing lasers in Rodi are in the UV range not the infrared (See column 2, line 54 et seq.) as in claim 9, and thus teach away from the use of narrow band IR sources as claimed. The limitations of claims 13 to 16 thus also would not have been obvious as Rodi teaches away from IR light sources as claimed.

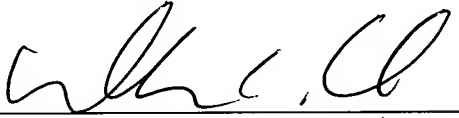
In view of the comments above, withdrawal of the rejection to claims 1, 5 and 12 to 16 is respectfully requested as well.

CONCLUSION

The present application is respectfully submitted as being in condition for allowance and applicants respectfully request such action.

Respectfully submitted,
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